ABSTRACT

A lossless encoder and decoder are provided for transmitting a multichannel signal on a medium such as DVD-Audio. The encoder accepts additionally a downmix specification and splits the encoded stream into two substreams, such that a two-channel decoder of meagre computational power can implement the downmix specification by decoding one substream, while a multichannel decoder can decode the original multichannel signal losslessly using both substreams. Further features provide for efficient implementation on 24-bit processors, for confirmation of lossless reproduction to the user, and for benign behaviour in the case of downmix specifications that result in overload. The principle is also extended to mixed-rate signals, where for example some input channels are sampled at 48kHz and some are sampled at 96kHz.